



ENVIRONMENTAL AND PUBLIC PROTECTION CABINET

Steven L. Beshear
Governor

DEPARTMENT FOR ENVIRONMENTAL PROTECTION
300 FAIR OAKS LANE
FRANKFORT, KENTUCKY 40601
PHONE (502) 564-2150
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www.dep.ky.gov

Robert D. Vance
Secretary

R. Bruce Scott
Commissioner

February 18, 2008

Mr. Michael W. Rogers
Marshall Co. Sanitation District 2 WWTP
US 68 & 641 Purchase Pkwy
Draffenville, KY 42025

Re: KPDES Application Complete
KPDES No.: KY0044181
Marshall Co. Sanitation District 2 WWTP
AI ID: 2932
Activity ID: APE20080001
Marshall County, Kentucky

Dear Mr. Rogers,

Your revised Kentucky Pollutant Discharge Elimination System (KPDES) permit application for the above-referenced facility was received by the Division of Water on February 07, 2008. A completeness review of your permit application has been conducted. Please be aware that you may be asked to provide additional information to clarify, modify, or supplement your application material. In accordance with 401 KAR 5:075, Section 1(7) you are being provided written notification that your application has been deemed complete as of the date of this letter.

If you have any questions concerning this matter, please call me at (502) 564-8158, extension 652.

Sincerely,

Allen Ingram II
Environmental Engineer Assistant I
KPDES Branch
Division of Water

SJB
Enclosures

c: Paducah Regional Office
Division of Water Files



Florence & Hutcheson, Inc.

CONSULTING ENGINEERS

February 6, 2008

Larry Sowder
Kentucky Division of Water
KPDES Branch
14 Reilly Road
Frankfort, KY 40601

RE: Draffenville WWTP Expansion
Marshall County, Kentucky
Project ID: 06-0627
Marshall County Sanitation District 2 WWTP – 2932

Dear Mr. Sowder:

The revised KPDES Forms A and 1 for the above referenced project are enclosed for your review and approval. These forms have been revised to reflect current plans to replace the existing 50,000 GPD extended aeration package wastewater treatment plant (WWTP) with a new field erected 150,000 GPD WWTP. The new facility will utilize sequence batch reactor, post aeration, and UV disinfection technology. As a note, plans and specifications for this new facility were submitted to the Facilities Construction Branch on July 23, 2007. Technical approval was awarded by Greg Goode by letter dated September 20th.

The new WWTP was designed in accordance with the regional facilities plan approved in 2005 with the following discharge limits:

PARAMETER	May 1 – Oct.31 (mg/l)	Nov.1 – Apr.30 (mg/l)
BOD5	20	20
TSS	30	30
NH4-N	4	10
P	1	2
DO	7	7

Please feel free to contact me at 270-444-9691 if you have any questions or if I can be of further assistance.

Sincerely,

FLORENCE & HUTCHESON, INC.

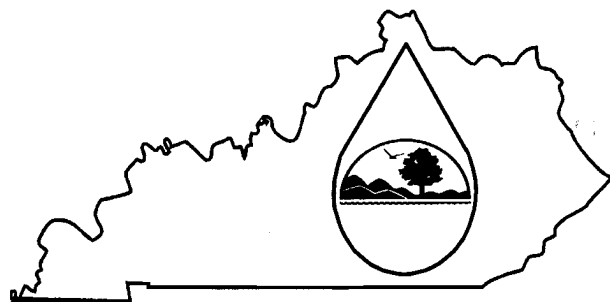
Michael W. Rogers, PE
Project Engineer

CC: Randy Travis, City of Draffenville
Gaye Brewer, Department for Environmental Protection
Greg Goode, Facilities Construction Branch
F&H File #03086

KPDES FORM 1

KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT APPLICATION



This is an application to: (check one)

- ☐ Apply for a new permit.
☐ Apply for reissuance of expiring permit.
☐ Apply for a construction permit.
☒ Modify an existing permit.

Give reason for modification under Item II.A.

A complete application consists of this form and one of the following:

Form A, Form B, Form C, Form F, or Form SC

For additional information contact:

KPDES Branch (502) 564-3410

I. FACILITY LOCATION AND CONTACT INFORMATION		AGENCY USE	0044181
A. Name of business, municipality, company, etc. requesting permit Marshall County Sanitation District No.2			
B. Facility Name and Location		C. Primary Mailing Address (all facility correspondence will be sent to this address). Include owner mailing address on a separate sheet if different.	
Facility Location Name:		Facility Contact Name and Title: Mr. <input checked="" type="checkbox"/> Ms. <input type="checkbox"/>	
Marshall County #2 (Draffenville) Wastewater Treatment Plant		Randy Travis, Chairman	
Facility Location Address (i.e. street, road, etc., not PO Box):		Mailing Address:	
Kentucky Highways 68 and 641		P.O. Box 432	
Facility Location City, State, Zip Code:		Mailing City, State, Zip Code:	
Draffenville, Kentucky		Benton, KY 42025	
		Facility Contact Telephone Number:	
		(270) 527-1366	

II. FACILITY DESCRIPTION			
A. Provide a brief description of activities, products, etc: A new WWTP will be constructed adjacent to the existing WWTP and once in operation will replace the existing WWTP. As with the existing WWTP, the proposed WWTP will treat domestic waste and discharge the treated water into an unnamed tributary of Chestnut Creek. The new facility will treat 0.150 MGD domestic wastewater.			
B. Standard Industrial Classification (SIC) Code and Description			
Principal SIC Code & Description:	4952 - Sewage System including Treatment		
Other SIC Codes:			

III. FACILITY LOCATION	
A. Attach a U.S. Geological Survey 7 1/2 minute quadrangle map for the site. (See instructions)	
B. County where facility is located: Marshall	City where facility is located (if applicable): Draffenville
C. Body of water receiving discharge: Chestnut Creek	
D. Facility Site Latitude (degrees, minutes, seconds): 36°55'32" North	Facility Site Longitude (degrees, minutes, seconds): 88°20'52" West
E. Method used to obtain latitude & longitude (see instructions): USGS National Map Viewer - http://nationalmap.gov	
F. Facility Dun and Bradstreet Number (DUNS #) (if applicable): n/a	

IV. OWNER/OPERATOR INFORMATION**A. Type of Ownership:**☒ Publicly Owned ☐ Privately Owned ☐ State Owned ☐ Both Public and Private Owned ☐ Federally owned**B. Operator Contact Information (See instructions)**

Name of Treatment Plant Operator:

William A. Artis

Telephone Number:

(270) 205-1571

Operator Mailing Address (Street):

1303 Pugh School Road

Operator Mailing Address (City, State, Zip Code):

Benton, Kentucky 42025

Is the operator also the owner?

Yes ☐No ☒

Is the operator certified? If yes, list certification class and number below.

Yes ☒No ☐

Certification Class:

II

Certification Number:

5404

V. EXISTING ENVIRONMENTAL PERMITS

Current NPDES Number:

KY0044181

Issue Date of Current Permit:

Expiration Date of Current Permit:

Number of Times Permit Reissued:

unknown

Date of Original Permit Issuance:

unknown

Sludge Disposal Permit Number:

n/a

Kentucky DOW Operational Permit #:

n/a

Kentucky DSMRE Permit Number(s):

n/a

Which of the following additional environmental permit/registration categories will also apply to this facility?

CATEGORY	EXISTING PERMIT WITH NO.	PERMIT NEEDED WITH PLANNED APPLICATION DATE
Air Emission Source	n/a	n/a
Solid or Special Waste	n/a	n/a
Hazardous Waste - Registration or Permit	n/a	n/a

VI. DISCHARGE MONITORING REPORTS (DMRs)

KPDES permit holders are required to submit DMRs to the Division of Water on a regular schedule (as defined by the KPDES permit). Information in this section serves to specifically identify the name and telephone number of the DMR official and the DMR mailing address (if different from the primary mailing address in Section I.C).

A. DMR Official (i.e., the department, office or individual designated as responsible for submitting DMR forms to the Division of Water):	Randy Travis
DMR Official Telephone Number:	(270) 527-1366

B. DMR Mailing Address:

- Address the Division of Water will use to mail DMR forms (if different from mailing address in Section I.C), or
- Contact address if another individual, company, laboratory, etc. completes DMRs for you; e.g., contract laboratory address.

DMR Mailing Name:	
DMR Mailing Address:	
DMR Mailing City, State, Zip Code:	

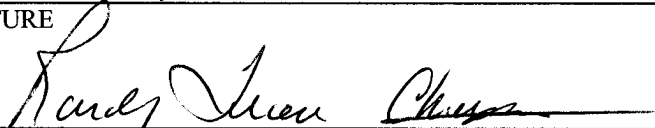
VII. APPLICATION FILING FEE

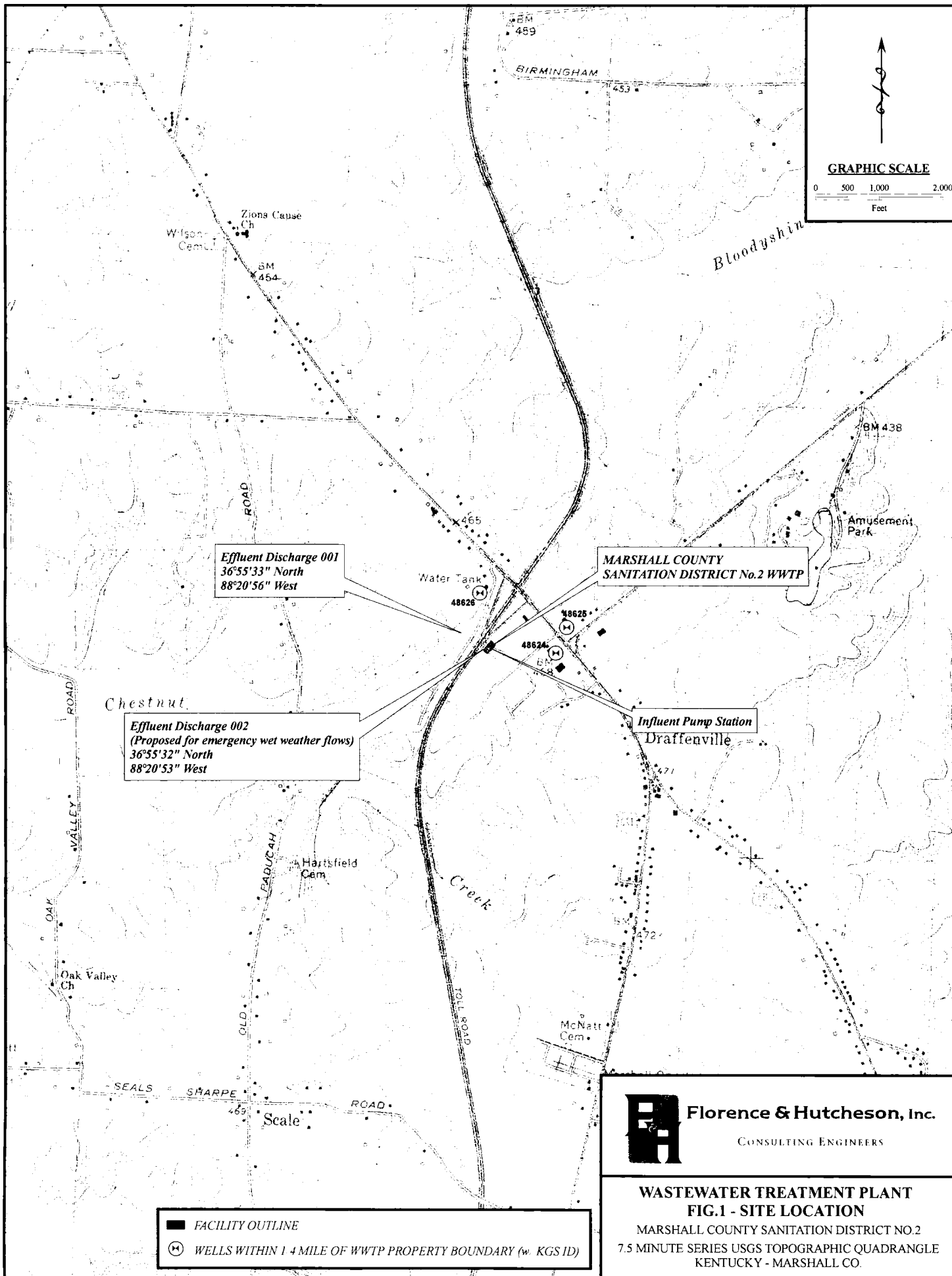
KPDES regulations require that a permit applicant pay an application filing fee equal to twenty percent of the permit base fee. Please examine the base and filing fees listed below and in the Form 1 instructions and enclose a check payable to "Kentucky State Treasurer" for the appropriate amount (for permit renewals, please include the KPDES permit number on the check to ensure proper crediting). Descriptions of the base fee amounts are given in the "General Instructions."

Facility Fee Category:	Filing Fee Enclosed:
Public Owned Treatment Works (No Fee Due)	\$0.00

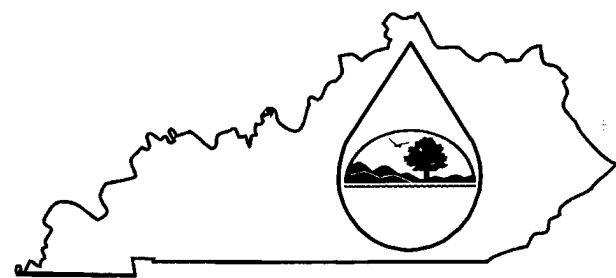
VIII. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME AND OFFICIAL TITLE (type or print):	TELEPHONE NUMBER (area code and number):
Mr. <input checked="" type="checkbox"/> Ms. <input type="checkbox"/> Randy Travis, Chairman	(270) 527-1366
SIGNATURE 	DATE: 1-30-08



KPDES FORM A



KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT APPLICATION

A complete application consists of this form and Form 1.
For additional information, contact KPDES Branch (502) 564-3410.

APPLICATION OVERVIEW	AGENCY USE	0	0	4	4	1	8	1
<p>Form A has been developed in a modular format and consists of a "Basic Application Information" packet and a "Supplemental Application Information" packet. The Basic Application Information packet is divided into two parts. All applicants must complete Parts A and C. Applicants with a design flow greater than or equal to 0.1 mgd must also complete Part B. Some applicants must also complete the Supplemental Application Information packet. The following items explain which parts of Form A you must complete.</p>								
<p>BASIC APPLICATION INFORMATION:</p> <p>A. Basic Application Information for all Applicants. All applicants must complete questions A.1 through A.8. A treatment works that discharges effluent to surface waters of the United States must also answer questions A.9 through A.12.</p> <p>B. Additional Application Information for Applicants with a Design Flow ≥ 0.1 mgd. All treatment works that have design flows greater than or equal to 0.1 million gallons per day must complete questions B.1 through B.6.</p> <p>C. Certification. All applicants must complete Part C (Certification).</p> <p>SUPPLEMENTAL APPLICATION INFORMATION:</p> <p>D. Expanded Effluent Testing Data. A treatment works that discharges effluent to surface waters of the United States and meets one or more of the following criteria must complete Part D (Expanded Effluent Testing Data):</p> <ol style="list-style-type: none">1. Has a design flow rate greater than or equal to 1 mgd,2. Is required to have a pretreatment program (or has one in place), or3. Is otherwise required by the permitting authority to provide the information. <p>E. Toxicity Testing Data. A treatment works that meets one or more of the following criteria must complete Part E (Toxicity Testing Data):</p> <ol style="list-style-type: none">1. Has a design flow rate greater than or equal to 1 mgd,2. Is required to have a pretreatment program (or has one in place), or3. Is otherwise required by the permitting authority to submit results of toxicity testing. <p>F. Industrial User Discharges and RCRA/CERCLA Wastes. A treatment works that accepts process wastewater from any significant industrial users (SIUs) or receives RCRA or CERCLA wastes must complete Part F (Industrial User Discharges and RCRA/CERCLA Wastes). SIUs are defined as:</p> <ol style="list-style-type: none">1. All industrial users subject to Categorical Pretreatment Standards under 40 Code of Federal Regulations (CFR) 403.6 and 40 CFR Chapter I, Subchapter N (see instructions); and2. Any other industrial user that:<ol style="list-style-type: none">a. Discharges an average of 25,000 gallons per day or more of process wastewater to the treatment works (with certain exclusions); orb. Contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the treatment plant; orc. Is designated as an SIU by the control authority. <p>G. Combined Sewer Systems. A treatment works that has a combined sewer system must complete Part G (Combined Sewer Systems).</p>								
<p>ALL APPLICANTS MUST COMPLETE PART C (CERTIFICATION)</p>								

BASIC APPLICATION INFORMATION

PART A. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS:

All treatment works must complete questions A.1 through A.8 of this Basic Application Information packet.

A.1. Facility Information.

Facility name Marshall County Sanitation District No.2

Mailing Address P.O. Box 432
Benton, KY 42025

Contact person Randy Travis

Title Chairman

Telephone number (270) 527-1366

Facility Address Kentucky Highway 68 and 641
(not P.O. Box) _____

A.2. Applicant Information. If the applicant is different from the above, provide the following:

Applicant name Florence & Hutcheson, Inc.

Mailing Address 2550 Irvin Cobb Drive
Paducah, Kentucky 42003

Contact person Michael W. Rogers

Title Project Engineer

Telephone number (270) 444-9691

Is the applicant the owner or operator (or both) of the treatment works?

_____ owner _____ operator

Indicate whether correspondence regarding this permit should be directed to the facility or the applicant.

 X facility _____ applicant

A.3. Existing Environmental Permits. Provide the permit number of any existing environmental permits that have been issued to the treatment works (include state-issued permits).

NPDES	<u>KY0044181</u>	PSD	_____
UIC	_____	Other	_____
RCRA	_____	Other	_____

A.4. Collection System Information. Provide information on municipalities and areas served by the facility. Provide the name and population of each entity and, if known, provide information on the type of collection system (combined vs. separate) and its ownership (municipal, private, etc.).

Name	Population Served	Type of Collection System	Ownership
<u>Draffenville</u>	<u>91</u>	<u>Separate</u>	<u>Municipal</u>
_____	_____	_____	_____
_____	_____	_____	_____
Total population served		_____	_____

A.5. Indian Country.

- a. Is the treatment works located in Indian Country?

Yes X No

- b. Does the treatment works discharge to a receiving water that is either in Indian Country or that is upstream from (and eventually flows through) Indian Country?

Yes X No

A.6. Flow. Indicate the design flow rate of the treatment plant (i.e., the wastewater flow rate that the plant was built to handle). Also provide the average daily flow rate and maximum daily flow rate for each of the last three years. Each year's data must be based on a 12-month time period with the 12th month of "this year" occurring no more than three months prior to this application submittal.

- a. Design flow rate 0.150 mgd

Two Years Ago

Last Year

This Year

- | | | | | |
|-----------------------------------|--------|--------|--------|-----|
| b. Annual average daily flow rate | 0.0370 | 0.0332 | 0.0328 | mgd |
|-----------------------------------|--------|--------|--------|-----|

- | | | | | |
|----------------------------|--------|--------|--------|-----|
| c. Maximum daily flow rate | 0.1053 | 0.1003 | 0.0754 | mgd |
|----------------------------|--------|--------|--------|-----|

A.7. Collection System. Indicate the type(s) of collection system(s) used by the treatment plant. Check all that apply. Also estimate the percent contribution (by miles) of each.

- | | | | |
|----------|-------------------------|-----|---|
| <u>X</u> | Separate sanitary sewer | 100 | % |
|----------|-------------------------|-----|---|

- | | Combined storm and sanitary sewer | % |
|-----|-----------------------------------|-----|
| 1 | 1 | 1 |
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| 99 | 99 | 99 |
| 100 | 100 | 100 |

A.8. Discharges and Other Disposal Methods.

- a. Does the treatment works discharge effluent to waters of the U.S.? X Yes No

If yes, list how many of each of the following types of discharge points the treatment works uses:

- | | |
|-----------------------------------|---|
| i. Discharges of treated effluent | 1 |
|-----------------------------------|---|

- ii. Discharges of untreated or partially treated effluent

- iii. Combined sewer overflow points

- iv. Constructed emergency overflows (prior to the headworks)

- | | | |
|----------|---|---|
| v. Other | Emergency discharge of treated effluent | 1 |
|----------|---|---|

- | | | | |
|--|-----|---|----|
| b. Does the treatment works discharge effluent to basins, ponds, or other surface impoundments that do not have outlets for discharge to waters of the U.S.? | Yes | X | No |
|--|-----|---|----|

If yes, provide the following for each surface impoundment:

Location: _____

Annual average daily volume discharged to surface impoundment(s) mgd

Is discharge continuous or intermittent?

- c. Does the treatment works land-apply treated wastewater? Yes ☒ No ☐

If yes, provide the following for each land application site:

Location:

Number of acres: _____

Annual average daily volume applied to site: _____ Mgd

Is land application continuous or intermittent?

- | | | | |
|--|-----|---|----|
| d. Does the treatment works discharge or transport treated or untreated wastewater to another treatment works? | Yes | X | No |
|--|-----|---|----|

If yes, describe the mean(s) by which the wastewater from the treatment works is discharged or transported to the other treatment works (e.g., tank truck, pipe).

If transport is by a party other than the applicant, provide:

Transporter name:

Mailing Address:

Contact person:

Title:

Telephone number:

For each treatment works that receives this discharge, provide the following:

Name:

Mailing Address:

Contact person:

Title:

Telephone number:

If known, provide the NPDES permit number of the treatment works that receives this discharge.

Provide the average daily flow rate from the treatment works into the receiving facility.

mgd

- e. Does the treatment works discharge or dispose of its wastewater in a manner not included in A.8.a through A.8.d above (e.g., underground percolation, well injection)?

Yes

X

No

If yes, provide the following for each disposal method:

Description of method (including location and size of site(s) if applicable):

Annual daily volume disposed of by this method:

Is disposal through this method

continuous or

intermittent?

WASTEWATER DISCHARGES:

If you answered "yes" to question A.8.a, complete questions A.9 through A.12 once for each outfall (including bypass points) through which effluent is discharged. Do not include information on combined sewer overflows in this section. If you answered "no" to question A.8.a, go to Part B, "Additional Application Information for Applicants with a Design Flow Greater than or Equal to 0.1 mgd."

A.9. Description of Outfall.

- a. Outfall number 001
- b. Location Draffenville 42025
(City or town, if applicable) (Zip Code)
Marshall Kentucky
(County) (State)
36°55'33" North 88°20'56" West
(Latitude) (Longitude)
- c. Distance from shore (if applicable) _____ ft.
- d. Depth below surface (if applicable) _____ ft.
- e. Average daily flow rate _____ mgd
- f. Does this outfall have either an intermittent or a periodic discharge?
_____ Yes _____ ☒ No (go to A.9.g.)
- If yes, provide the following information:
- Number of times per year discharge occurs: _____
- Average duration of each discharge: _____
- Average flow per discharge: _____ mgd
- Months in which discharge occurs: _____
- g. Is outfall equipped with a diffuser? _____ Yes _____ ☒ No

A.10. Description of Receiving Waters.

- a. Name of receiving water Unnamed tributary of Chestnut Creek, then into Chestnut Creek, then into Clarks River, then into the Tennessee River, then into the Ohio River.
- b. Name of watershed (if known) Lower Tennessee
- United States Soil Conservation Service 14-digit watershed code (if known): 06040006-040-670
- c. Name of State Management/River Basin (if known): _____
- United States Geological Survey 8-digit hydrologic cataloging unit code (if known): 06040006
- d. Critical low flow of receiving stream (if applicable):
acute _____ cfs chronic _____ cfs
- e. Total hardness of receiving stream at critical low flow (if applicable): _____ mg/l of CaCO₃

A.11. Description of Treatment.

- a. What levels of treatment are provided? Check all that apply.

☒ Primary ☐ Secondary
☐ Advanced ☐ Other. Describe: _____

- b. Indicate the following removal rates (as applicable):

Design BOD₅ removal or Design CBOD₅ removal 93 %
Design SS removal 87 %
Design P removal 90 %
Design N removal 81 %
Other _____ %

- c. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe.

Ultraviolet Light

If disinfection is by chlorination, is dechlorination used for this outfall? ☐ Yes ☐ No

- d. Does the treatment plant have post aeration?

☒ Yes ☐ No

A.12. Effluent Testing Information. All Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three samples and must be no more than four and one-half years apart.

Outfall number: 001

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)	7.04	s.u.			
pH (Maximum)	7.61	s.u.			
Flow Rate	0.045	MGD	0.042	MGD	3
Temperature (Winter)	16	°C	13.73	°C	3
Temperature (Summer)					

* For pH please report a minimum and a maximum daily value

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		

CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.

BIOCHEMICAL OXYGEN DEMAND (Report one)	BOD-5						
	CBOD-5	17	mg/l	10	mg/l	3	Composite 2.0
FECAL COLIFORM		>600	#/ 100 ml	213.33	#/ 100 ml	3	Grab 10.0
TOTAL SUSPENDED SOLIDS (TSS)		29	mg/l	16	mg/l	3	Composite 1.0

END OF PART A.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM A YOU MUST COMPLETE

WASTEWATER DISCHARGES:

If you answered "yes" to question A.8.a, complete questions A.9 through A.12 once for each outfall (including bypass points) through which effluent is discharged. Do not include information on combined sewer overflows in this section. If you answered "no" to question A.8.a, go to Part B, "Additional Application Information for Applicants with a Design Flow Greater than or Equal to 0.1 mgd."

A.9. Description of Outfall.

- a. Outfall number 002
- b. Location Draffenville 42025
(City or town, if applicable) (Zip Code)
Marshall Kentucky
(County) (State)
36°55'32" North 88°20'53" West
(Latitude) (Longitude)
- c. Distance from shore (if applicable) _____ ft.
- d. Depth below surface (if applicable) _____ ft.
- e. Average daily flow rate _____ mgd
- f. Does this outfall have either an intermittent or a periodic discharge? _____ X _____ Yes _____ No (go to A.9.g.)
- If yes, provide the following information:
- Number of times per year discharge occurs: Emergency Wet Weather
- Average duration of each discharge: _____
- Average flow per discharge: _____ mgd
- Months in which discharge occurs: _____
- g. Is outfall equipped with a diffuser? _____ Yes _____ X _____ No

A.10. Description of Receiving Waters.

- a. Name of receiving water Unnamed tributary of Chestnut Creek, then into Chestnut Creek, then into Clarks River, then into the Tennessee River, then into the Ohio River.
- b. Name of watershed (if known) Lower Tennessee
- United States Soil Conservation Service 14-digit watershed code (if known): 06040006-040-670
- c. Name of State Management/River Basin (if known): _____
- United States Geological Survey 8-digit hydrologic cataloging unit code (if known): 06040006
- d. Critical low flow of receiving stream (if applicable):
acute _____ cfs chronic _____ cfs
- e. Total hardness of receiving stream at critical low flow (if applicable): _____ mg/l of CaCO₃

A.11. Description of Treatment.

- a. What levels of treatment are provided? Check all that apply.

☒ Primary ☐ Secondary☐ Advanced ☐ Other. Describe: _____

- b. Indicate the following removal rates (as applicable):

Design BOD₅ removal or Design CBOD₅ removal 93 %Design SS removal 87 %Design P removal 90 %Design N removal 81 %

Other _____ %

- c. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe.

Ultraviolet Light

If disinfection is by chlorination, is dechlorination used for this outfall?

☐ Yes ☐ No

- d. Does the treatment plant have post aeration?

☒ Yes ☐ No

A.12. Effluent Testing Information. All Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three samples and must be no more than four and one-half years apart.

Outfall number: 002

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)	7.04	s.u.			
pH (Maximum)	7.61	s.u.			
Flow Rate	0.045	MGD	0.042	MGD	3
Temperature (Winter)	16	°C	13.73	°C	3
Temperature (Summer)					

* For pH please report a minimum and a maximum daily value

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		

CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.

BIOCHEMICAL OXYGEN DEMAND (Report one)	BOD-5						
	CBOD-5	17	mg/l	10	mg/l	3	Composite 2.0
FECAL COLIFORM		>600	#/ 100 ml	213.33	#/ 100 ml	3	Grab 10.0
TOTAL SUSPENDED SOLIDS (TSS)		29	mg/l	16	mg/l	3	Composite 1.0

END OF PART A.

REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM A YOU MUST COMPLETE

BASIC APPLICATION INFORMATION

PART B. ADDITIONAL APPLICATION INFORMATION FOR APPLICANTS WITH A DESIGN FLOW GREATER THAN OR EQUAL TO 0.1 MGD (100,000 gallons per day).

All applicants with a design flow rate ≥ 0.1 mgd must answer questions B.1 through B.6. All others go to Part C (Certification).

B.1. Inflow and Infiltration. Estimate the average number of gallons per day that flow into the treatment works from inflow and/or infiltration.

_____ 58,000 _____ gpd

Briefly explain any steps underway or planned to minimize inflow and infiltration.

The district continues an accelerated sewer maintenance program to identify and complete repairs to deteriorated portions of the collection system. The majority of the problems are isolated to areas with vitrified clay pipe and older lift stations. The district will continue an aggressive schedule for repairing the system.

B.2. Topographic Map. Attach to this application a topographic map of the area extending at least one mile beyond facility property boundaries. This map must show the outline of the facility and the following information. (You may submit more than one map if one map does not show the entire area.)

- The area surrounding the treatment plant, including all unit processes.
- The major pipes or other structures through which wastewater enters the treatment works and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable.
- Each well where wastewater from the treatment plant is injected underground.
- Wells, springs, other surface water bodies, and drinking water wells that are: 1) within 1/4 mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant.
- Any areas where the sewage sludge produced by the treatment works is stored, treated, or disposed.
- If the treatment works receives waste that is classified as hazardous under the Resource Conservation and Recovery Act (RCRA) by truck, rail, or special pipe, show on the map where that hazardous waste enters the treatment works and where it is treated, stored, and/or disposed.

B.3. Process Flow Diagram or Schematic. Provide a diagram showing the processes of the treatment plant, including all bypass piping and all backup power sources or redundancy in the system. Also provide a water balance showing all treatment units, including disinfection (e.g., chlorination and dechlorination). The water balance must show daily average flow rates at influent and discharge points and approximate daily flow rates between treatment units. Include a brief narrative description of the diagram.

B.4. Operation/Maintenance Performed by Contractor(s).

Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor? ____ Yes ____ ☒ No

If yes, list the name, address, telephone number, and status of each contractor and describe the contractor's responsibilities (attach additional pages if necessary).

Name: _____

Mailing Address: _____

Telephone Number: _____

Responsibilities of Contractor: _____

B.5. Scheduled Improvements and Schedules of Implementation. Provide information on any uncompleted implementation schedule or uncompleted plans for improvements that will affect the wastewater treatment, effluent quality, or design capacity of the treatment works. If the treatment works has several different implementation schedules or is planning several improvements, submit separate responses to question B.5 for each. (If none, go to question B.6.)

- List the outfall number (assigned in question A.9) for each outfall that is covered by this implementation schedule.

- Indicate whether the planned improvements or implementation schedule are required by local, State, or Federal agencies.

____ Yes ____ No

c If the answer to B.5.b is "Yes," briefly describe, including new maximum daily inflow rate (if applicable).

d. Provide dates imposed by any compliance schedule or any actual dates of completion for the implementation steps listed below, as applicable. For improvements planned independently of local, State, or Federal agencies, indicate planned or actual completion dates, as applicable. Indicate dates as accurately as possible.

	Schedule	Actual Completion
Implementation Stage	MM / DD / YYYY	MM / DD / YYYY
– Begin construction	___/___/___	___/___/___
– End construction	___/___/___	___/___/___
– Begin discharge	___/___/___	___/___/___
– Attain operational level	___/___/___	___/___/___

e. Have appropriate permits/clearances concerning other Federal/State requirements been obtained? ☐ Yes ☐ No

Describe briefly: _____

B.6. EFFLUENT TESTING DATA (GREATER THAN 0.1 MGD ONLY).

Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall Number: 001 & 002

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.							
AMMONIA (as N)	7.20	mg/l	3.07	mg/l	3	Composite	1.0
CHLORINE (TOTAL RESIDUAL, TRC)	1.66	mg/l	1.31	mg/l	3	Field Reading	
DISSOLVED OXYGEN	7.79	mg/l	5.04	mg/l	3	Field Reading	
TOTAL KJELDAHL NITROGEN (TKN)	12.50	mg/l	7.13	mg/l	3	Composite	1.0
NITRATE PLUS NITRITE NITROGEN	11.01	mg/l	6.09	mg/l	3	Composite	Nitrate – 0.1 Nitrite – 0.02
OIL and GREASE	3.00	mg/l	2.33	mg/l	3	Grab	2
PHOSPHORUS (Total)	0.98	mg/l	0.51	mg/l	3	Composite	0.01
TOTAL DISSOLVED SOLIDS (TDS)	326.00	mg/l	313.33	mg/l	3	Composite	1.0
OTHER							

END OF PART B.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM A YOU MUST COMPLETE

BASIC APPLICATION INFORMATION

PART C. CERTIFICATION

All applicants must complete the Certification Section. Refer to instructions to determine who is an officer for the purposes of this certification. All applicants must complete all applicable sections of Form 2A, as explained in the Application Overview. Indicate below which parts of Form 2A you have completed and are submitting. By signing this certification statement, applicants confirm that they have reviewed Form 2A and have completed all sections that apply to the facility for which this application is submitted.

Indicate which parts of Form 2A you have completed and are submitting:

☒ Basic Application Information packet

Supplemental Application Information packet:

☐ Part D (Expanded Effluent Testing Data)

☐ Part E (Toxicity Testing: Biomonitoring Data)

☐ Part F (Industrial User Discharges and RCRA/CERCLA Wastes)

☐ Part G (Combined Sewer Systems)

ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title Randy Travis, Chairman

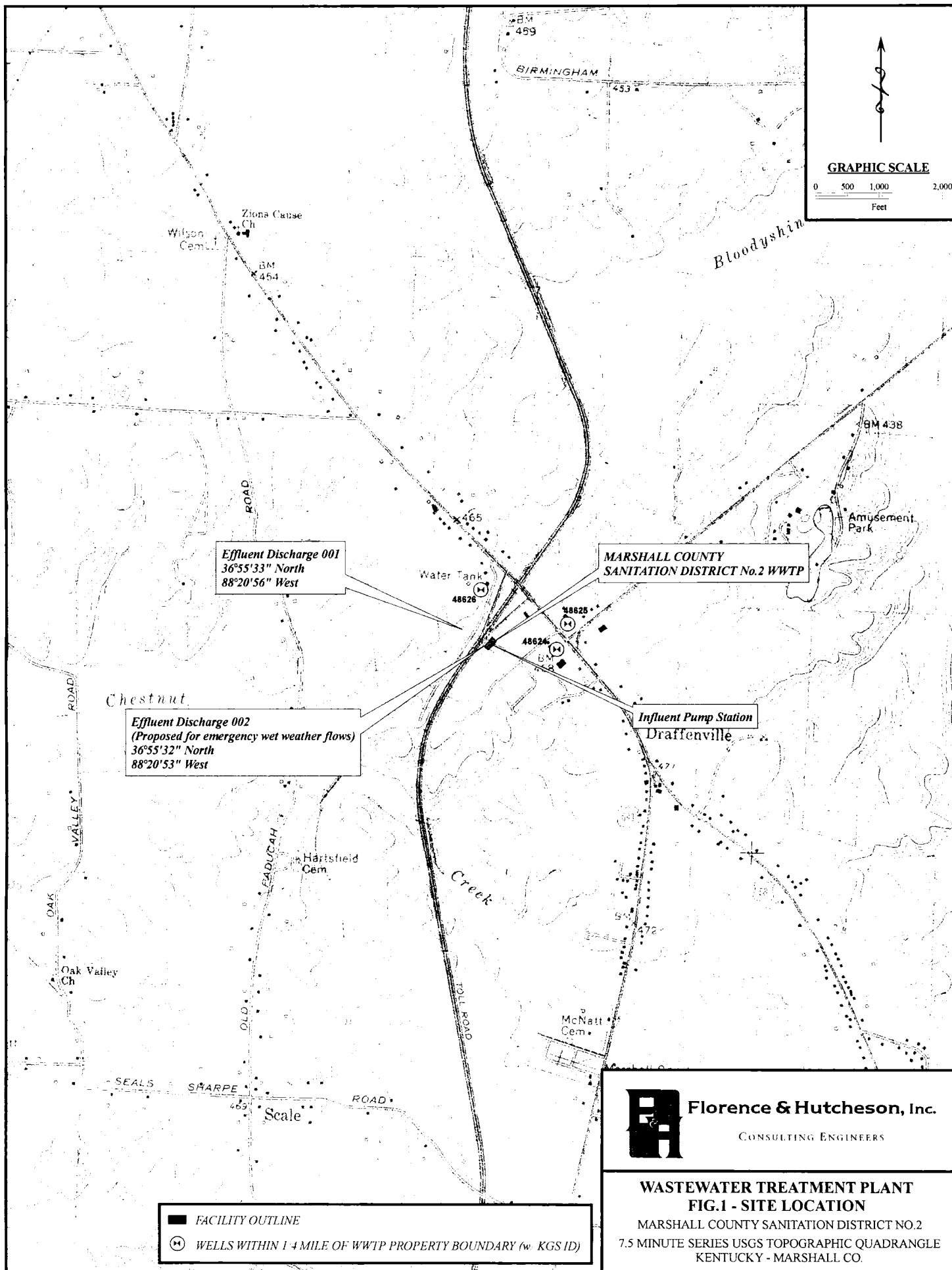
Signature 

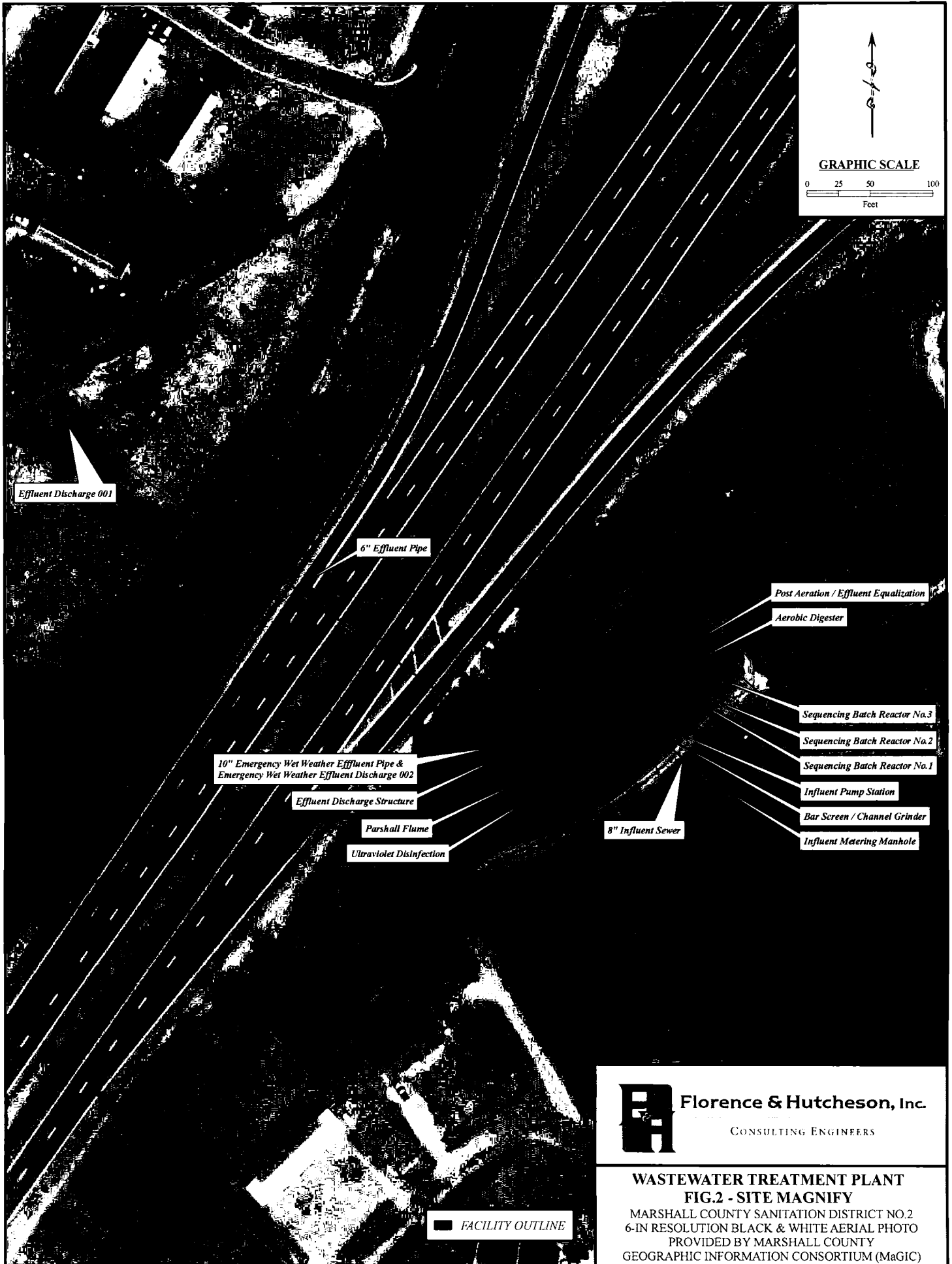
Telephone number (270) 527-1366

Date signed 1-30-08

Upon request of the permitting authority, you must submit any other information necessary to assess wastewater treatment practices at the treatment works or identify appropriate permitting requirements.

SEND COMPLETED FORMS TO:

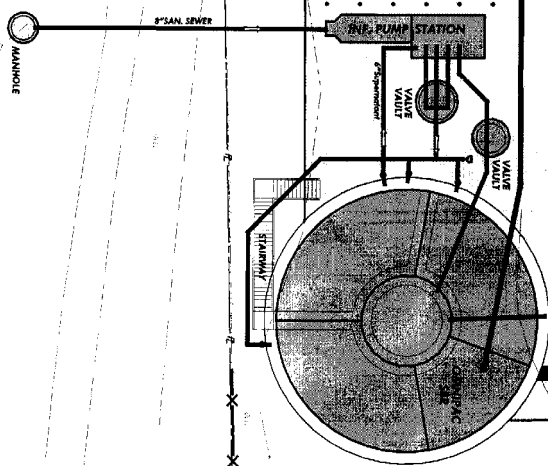




Florence & Hutcheson, Inc.
CONSULTING ENGINEERS

**WASTEWATER TREATMENT PLANT
FIG.2 - SITE MAGNIFY**

MARSHALL COUNTY SANITATION DISTRICT NO.2
6-IN RESOLUTION BLACK & WHITE AERIAL PHOTO
PROVIDED BY MARSHALL COUNTY
GEOGRAPHIC INFORMATION CONSORTIUM (MaGIC)



MANHOLE

3

 $\frac{1}{2} \log 2$ 1
2
3
4

1



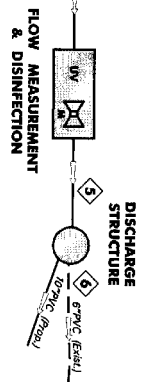
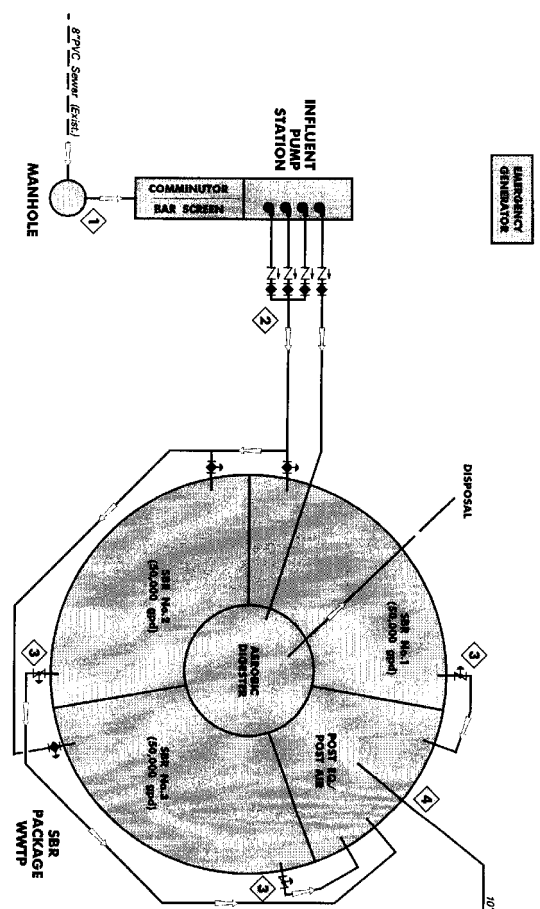
**WASTEWATER TREATMENT
PLANT EXPANSION**
*for the Marshall County
Sanitation District#2*
SITE MECHANICAL LAYOUT

B.M.#1
CRISSED, PAINTED SQUARE ON N.E. CORNER
OF CHLORINE CONTACT CHAMBERS CONC. SLAB
EL. 442.19

Page 9	306-4787825-001 10-10-19	
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Civil:	Project:	Approval:	Date:	Scale
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5



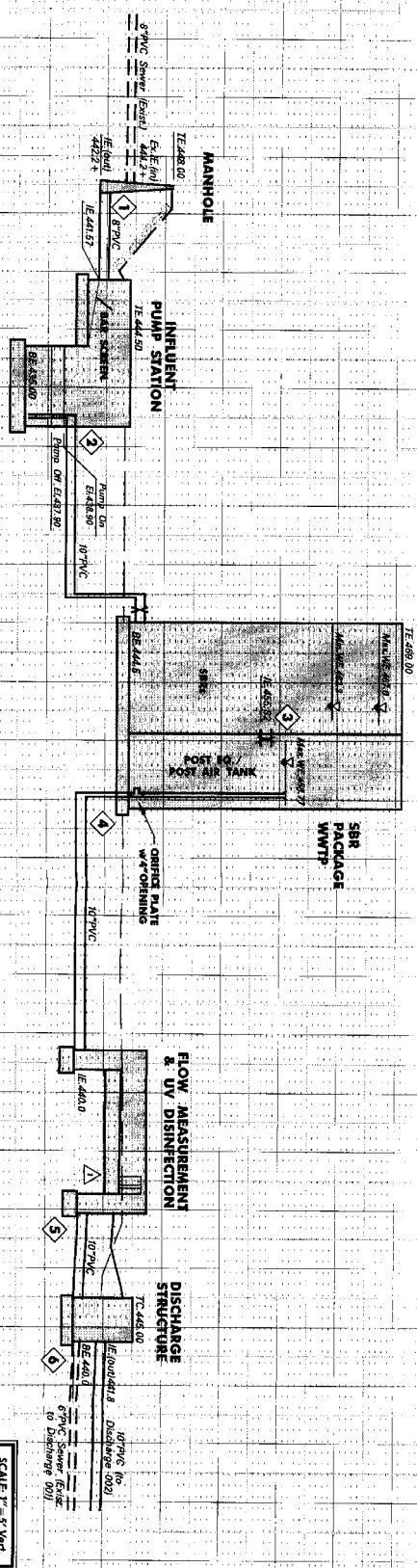
- LEGEND**
- ☐ PUMP
 - ⬆ SBR INFLUENT CONTROL VALVE - Elec. Actuator Plug Valve
 - ⬆ SHUT OFF VALVE - Manual Plug Valve
 - ⬆ SBR EFFLUENT CONTROL VALVE - Elec. Actuator Bally Valve
 - ⬆ CHECK VALVE
 - ⬆ PARSHALL FLUME w/ FLOWMETER

WATER BALANCE

AVERAGE DAILY FLOW RATES

1	104 gpm	4	104 gpm
2	104 gpm	5	104 gpm
3	104 gpm	6	104 gpm

(417 gpm for 30 min. ea. cycle)



SCALE 1" = 5' Vert.
N15 West

Florence & Hutchinson, Inc.
CONSULTING ENGINEERS

WASTEWATER TREATMENT PLANT EXPANSION
Sanitation District #209

PROCESS FLOW & HYDRAULIC LAYOUT

Drawn	10/1	Checked	10/1	Approved	10/1
Project	10/1	Scale	1" = 5'	Sheet	2



NARRATIVE DESCRIPTION OF THE MCSD No.2 WWTP

A new WWTP will be constructed adjacent to the existing WWTP and once in operation will replace the existing WWTP. As with the existing WWTP, the proposed WWTP will treat domestic waste and discharge the treated water into an unnamed tributary of Chestnut Creek. The new facility will treat 0.150 MGD domestic wastewater. Following is a narrative description of the new WWTP:

Domestic wastewater from the City of Draffenville is conveyed into the wastewater treatment plant through an 8" gravity sewer into an influent metering manhole equipped with area-velocity type flow meter that continuously record influent flow rate. From this manhole, wastewater is conveyed through an 8" gravity sewer into the influent pump station. The first chamber within this structure contains two (2) parallel channels. One channel is equipped with a comminutor and the other with a bar screen. The comminutor is used under normal operating conditions. The bar screen will be used primarily for bypass purposes when the channel grinder needs maintenance. From this chamber, wastewater then enters the pump station chamber equipped with a triplex arrangement of submersible pumps. Each pump is sized to pump the WWTP design flow of 105-gpm (150,000-gpd). The second pump is for wet weather flows and the third is a redundant pump. Through these pumps, wastewater is conveyed to one (1) of three (3) sequence batch reactor (SBR) chambers within the SBR Wastewater Treatment Plant for biological treatment. The pump discharge piping is equipped with electric actuated influent control plug valves that divert the wastewater to the SBR in operation. Each SBR rotates operation based on level or cycle time. For example, when SBR No.1 fills to its high water level, the electric actuated valve for SBR No.1 closes and the valve for SBR No.2 opens simultaneously. When this occurs, SBR No.1 continues its treatment process while SBR No.2 fills. Treated effluent is discharged from the SBR when the cycle time is completed. Electric actuated effluent control butterfly valves open and a decanter conveys the treated effluent to the post equalization / post aeration chamber at a rate of 417-gpm for 30 minutes. Within this chamber, the treated effluent is aerated and stored. Effluent continuously leaves this chamber through a 4" orifice plate which maintains a discharge rate of approximately 200-gpm. The orifice plate is connected to a 10" discharge pipe that conveys the effluent to the Flow Measurement and Disinfection Structure. Effluent first enters the UV chamber for disinfection and then enters the parshall flume equipped with a level transmitter that continuously reads and records effluent flow rate. A 10" gravity pipe then conveys the treated and disinfected effluent to the discharge structure. The discharge structure is equipped with two (2) discharge pipes; a 6" discharge pipe set at invert elevation 440.00' should convey up to approximately 250-gpm to effluent Discharge 001 and a 10" emergency discharge pipe set at invert elevation 441.80' that conveys wet weather flows to Discharge 002. This emergency wet weather discharge is used when the water level within the post equalization / post aeration chamber rises to the maximum level. If this occurs, effluent will discharge into an emergency overflow pipe that bypasses the 4" orifice and discharges directly into the 10" effluent pipe. Effluent is then conveyed at the decant rate of 417-gpm to the flow measurement and disinfection chamber where it then discharges into the effluent discharge structure. The water level in this structure then rises to the 10" discharge pipe because the influent flow rate exceeds what can be conveyed by means of the 6" discharge pipe. The 10" discharge pipe then conveys the wet weather flows to discharge 002.

Digested sludge is removed by a waste hauler and transported to a nearby WWTP for further treatment every 15 days.